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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,339	01/30/2002	Qian Zhao	0007975-0028	9849

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EXAMINER

SHERALI, ISHRAT I

ART UNIT PAPER NUMBER

2624

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,339

Applicant(s)

ZHAO ET AL.

Examiner

Sherali Ishrat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-31 and 34-38 is/are pending in the application.
- 4a) Of the above claim(s) 8-30 and 35-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,31 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment/Arguments

1. This action is in response to Applicants amendment/arguments filed on 5/19/06.

Applicant's arguments are fully considered. However the Applicant's argument are moot due to new grounds of rejection which was necessitated because of amendment to the claims.

Applicant's arguments with respect to rejection under 35 USC is not persuasive because it is not understood what is variable y'.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, claim in lines 1-4 recites various variables and symbols. Claim 5 is indefinite because claim does not recite what is variables y'. Proper correction is required. Claims 6-7 dependent on rejected claim 5 and hence they are also rejected.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 31 and 34 are rejected under 35 U.S.C. as being unpatentable over Slepian et al (Noiseless Coding of Correlated Information Sources, IEEE Transaction on Information Theory, Vol. IT-19 No. 4, July 1973) in view of Yan et al. (On Instantaneous Codes for Zero error Coding of Two Correlated Sources, IEEE 0-7803-5857-0/00).

Regarding claim 1 and 31, Slepian discloses encoding and decoding first and second data streams (Slepian in page 471 paragraph I Introduction left-column, lines 1-15 and in Figure 1 shows encoding and decoding first and second data streams) comprising:

encoding first data stream using a first encoder to produce a first encoded data stream (Slepian in page 471 paragraph I Introduction left-column, lines 1-15 and in Figure 1 shows encoding first data stream using a first encoder [x] to produce a first encoded data stream);

encoding second data stream using a second encoder to produce a second encoded data stream (Slepian in page 471 paragraph I Introduction left-column, lines 1-15 and in Figure 1 shows encoding first data stream using a secon encoder [y] to produce a second encoded data stream);

providing said first and second encoded data streams to a receiver (Slepian in page 471 paragraph I Introduction left-column, lines 1-15 and in Figure 1 shows providing said first and second encoded data streams to a receiver);

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decoding said first and second encoded data streams using a single decoder (Slepian in page 471 paragraph I Introduction left-column, lines 1-15 and in Figure 1 shows decoding said first and second encoded data streams using a single decode).

Slepian discloses nearly error free encoding in page 474, right hand column last two paragraphs. Slepian however has not explicitly disclosed optimal lossless encoding.

In the same field of endeavor of Slepian-Wolf coding/encoding of two correlated sources, Yan discloses optimal lossless encoding (Yan in page 344 paragraph I Introduction left column, lines 18-23 thru right-column, lines 1-7, shows error free encoding for first and second data stream [X and Y] using Huffman codes which corresponds to optimal lossless encoding).

Therefore it would have been obvious at the time the invention was made to use the teaching of Yan of error free encoding for first and second data stream [X and Y] by replacing the Slepian nearly error free encoding with error free encoding of Yn because such a process provide zero error instantaneous codes for the Slepian Wolf configuration as stated by Yan in the abstract of the paper thereby obtaining optimally recovering the signal at the decoder.

Regarding claims 4 and 34, Slepian shows providing said first and second encoded data streams to a receiver (Slepian in Figure 1 shows providing said first and second encoded data streams to a receiver).

Slepian however has not explicitly shows providing said first and second encoded data streams to a receiver as side information.

In the same field of endeavor of Slepian-Wolf coding/encoding, Yan discloses providing said first and second encoded data streams to a receiver as side information (Yan in page 344 paragraph I Introduction left-column lines 20-23 thru page 344 paragraph I Introduction right-column lines 1-4, Yn states "Decoding is done in two steps. X is first decoded in the usual way for Huffman codes. Then the decode value x will give us a set of codewords $\{f_2(y): p(x,y) > 0\}$ which can be used to decode Y. This corresponds to providing said first and second encoded data streams to a receiver as side information).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made use the teaching of Yan of providing said first and second encoded data streams to a receiver as side information in the system of Slepian because such a process provide zero error instantaneous codes for the Slepian Wolf configuration as stated by Yan in the abstract of the paper.

Allowable Subject Matter

8. Claims 5-7 are objected as being dependent on rejected base claim but would be allowable if rewritten in independent form including limitations of the claim and any intervening claims. Also provided that claims 5-7 overcome rejection under 35 USC § 112 second paragraph.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

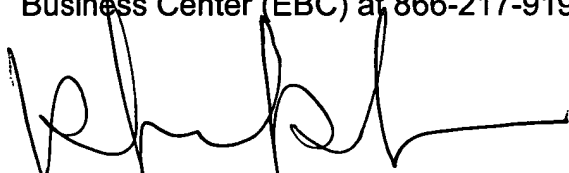
Communication

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherali Ishrat whose telephone number is 571-272-7398. The examiner can normally be reached on 8:00 AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ishrat Sherali

August 2, 2006